

Latrobe Valley Naturalist

January - February 2017

Issue No. 588

Office bearers

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Website

lvfieldnats.org

General meetings

Held at 7:30 pm on the fourth Friday of each month at the Newborough Uniting Church, Old Sale Road Newborough VIC 3825



Wellington Mint-bush *Prostanthera galbraithiae* flowering during the September excursion to Holey Plains State Park (Photo: Tamara Leitch).

Upcoming events

<u>February general meeting:</u> Friday 24 February Penguins at sea – Andre Chiaradia <u>Excursion</u>: Saturday 25 February – Phillip Island. Details TBC. <u>Club Summer Camp</u>: 3-6 February at Lakes Entrance <u>Botany Group</u>: Saturday 11 February – Lakes Entrance plants. Details TBC. <u>Bird Group</u>: Tuesday 14 February – EA Wetland survey. Meet at Morwell Bridge gate by 8.30am. Please confirm attendance beforehand with Alix on 5127 3393 or alixw@spin.net.au <u>Nature Photography Competition</u>: 17-26 February <u>Botany Group</u>: Saturday 4 March – grasses. Details TBC. <u>March general meeting</u>: Friday 24 March Drouin Significant Tree Register – Peter Ware

Issue no. 588

The Celia Rosser Gallery and Great Southern Rail Trail

What a treat we were in for today. Arriving at the Gallery in Fish Creek, we enjoyed the humour evident in the various metal sculptures and other artworks on display in the surrounding garden areas while we waited for the gallery to open. Then Celia herself arrived with her son who runs the enterprise. Celia generously spoke with us for a long time, taking us through tales that related to the artworks on display. Every picture had a story to tell. She had travelled throughout Australia, with the assistance of botanist Alex George, seeing and collecting the banksias herself, each illustration then taking approximately three months to complete. One series displayed the stages of 'building up' a piece using tracings laid over each other and the colour roughs. The works were magnificent, portraying the textures, colours and fine lines of the plants in extraordinary detail. Then there was the small matter of displaying to best advantage on the page, all just wonderful. I did not count but there were probably about 35 large prints on display, all appropriately framed using Banksia wood. There were also photographs of Celia with Queen Elizabeth and other dignitaries and the medals she has been awarded over the years in recognition of her skill and dedication in recording this genus for posterity. The originals belong to Monash University.

Carolyn Landon, Celia's biographer and our guest speaker the previous evening, had also joined us, and much to her delighted surprise was presented with an original art work by Celia.

After coffees and making purchases, we proceeded to a picnic shelter for lunch, not lingering long as it was cold and wet.

Then Graeme and Margaret Rowe took charge and off we drove to walk a newly-opened section of the rail trail between Meeniyan and Koonwarra. Leaving the cars at Koonwarra Reserve, we strolled (it had stopped raining) along a rather unexpectedly wide trail observing birds and plants. There were three newly-constructed bridges which,



Carolyn Landon (left) receiving an original painting from Celia Rosser (photo: David Stickney)

rather sadly, were not at all in keeping with the historical nature of some of the wooden trestles that were still evident. They crossed the East Branch of the Tarwin River, which drains the Dumbalk Valley and merges with the West Branch (which has its origins at Mt Worth), eventually completing its journey at Inverloch.

Graeme pointed out various geological features: the fish fossil dig site, fault plains and Koonwarra Bends. The botanists highlighted, amongst many things, a Tree Violet *Melicytus dentatus, Eucalyptus Strzeleckii* (which has recently been separated from *E. ovata*), Creeping Mistletoe *Muellerina eucalyptoides* and Tender Brake *Pteris tremula*. Margaret can be contacted for a full list. Avian highlights might have been soaring Wedge-tailed Eagles and, briefly for a few of us, a brilliant Crested Shrike-tit, as we completed the day back at the cars.

Julie Parker



A refurbished railway trestle bridge now forms part of the Great Southern Rail Trail east of Koonwarra. The bridge spans a meander, symptomatic of an old river valley, in the Tarwin River West Branch. The meander occurs within a steep-sided gorge in a region of more recent uplift. The Koonwarra fish fossil dig site is on the road reserve near the road cutting at centre top of the photograph.

Graeme Rowe

Winter Members' Night 22.07.2016

Birding around Deniliquin

Last December, nine of us joined an Australian Ornithological Services trip run out of Deniliquin. Using two vehicles, we were out from 3pm to 1am, and 7am to 1pm the following day. What a great time we had! Philip and Rob knew just where and when to go. We covered so many varied habitats, some being on private property, and saw 121 species, which for me included 11 new ones. The highlight for this region is observing the rare and lovely Plains Wanderer. We were not disappointed. After driving around a stubbly paddock on Rob's farm, there she was, caught in our headlights. The female is the larger and prettier with a chestnut breast patch. It is mainly the male that incubates and rears the young. When Europeans arrived they were common but, as is the case with so much of our flora and fauna, the changes in habitat and introduced predators resulted in their demise. Rob has been managing some of his property to suit the birds' needs, leaving native grasses and reducing grazing. There are only two species in the Family Pedionomidae so we were thrilled to have seen this Australian representative. As well as a barn owl, some other not-usually-seen creatures caught in the headlights that night were Gibber and Tessellated Geckos, a Fat-tailed Dunnart and a Hooded Scalyfoot (a type of legless lizard).

<u>Atacama Desert</u>

In April this year I spent 4½ days in this region of northern Chile, sandwiched between the Pacific and the Andes. Considered one of the driest areas in the world, with 10% (150) of the world's active volcanoes, the third largest geothermal field and salt flats, and at altitudes of between 2500–6000 metres, it was a fascinating region with a definite 'other worldly' ambience of nature in the raw. Staying in the old oasis town of San Pedro de Atacama, with small streets and single storey buildings of adobe, some with ceilings of cactus wood, I ventured out each day to take in the wondrous sights: a 12th Century fortress/village ruin of the Atacameno Indians, Salares del Atacama and Tara (a Ramsar site) where 3 of the 5 species of flamingos are found, numerous lakes of ever changing blues, greens, silver and grey all fringed with white salt and crystals, gorges and sandy canyons, and trackless caldera with all manner and colour of ancient rock formations 23 million years old. The Geyser del Tatio at 4320m has 70+ fumaroles and 64 geysers with vapour streams rising to 10m at 85°C. In the dawn light it was amazing, and so too was a 'paddle' in a hot, steaming river watched over by vicunas and viscachas sun-warming on the rocks above.

There were many birds but not so many plants. A cordon cactus grows 1cm a year, so many we saw would have been 200 years old. Flamingos are among the oldest existing group of birds with fossil records dating back 130 million years.

The region is very rich in minerals including a third of the world's supply of lithium.

The altitude and absence of large towns allows marvellous viewing of the night skies and one hugely informative tour I did had us looking through 12 telescopes focused on various objects including the rings of Saturn! If one had transport and time, a visit to the Atacama Large Millimetre Array (ALMA) – the single largest, multinational astronomical project on earth – would have been something special indeed. We saw its 66 antennae from a distance. They are 12m in diameter and act as a single telescope providing images 10x sharper than Hubble.

What a privilege it was to have been to this special region. It is only 3¹/₂ hours north of Santiago, so think about including it if you are ever passing through there.

Julie Parker

July Excursion to Lyrebird Walk 23.07.2016

Seven field nats braved fallen trees to take a stroll on Lyrebird Walk at Mirboo North admiring the creative seats and signs along the track with king, hard and soft, rough and smooth among the ferns and a supply of moss for the botanists. Stereum, Trametes and Postia brackets, coral, Scleroderma and Geastrum puff balls and a rooting shank for mycology. Ravens, robins, treecreepers, an eastern spinebill feeding on heath flowers and a glimpse of a scaly thrush for the bird lovers. A hasty lunch before the next squall then home to thaw out An enjoyable day despite the weather



Sally Green

Rakali – The Australian Water Rat

The Australian water rat *Hydromys chrysogaster*, also sometimes called the beaver rat and renamed rakali in recent years, is a native rodent that has been in Australia for millions of years. Our presenter on August 26 was Geoff Williams from the Australian Platypus Conservancy. Geoff referred to them as Australian water rats throughout his talk, but in this summary I'm going to call them rakali to save on typing.

Rakali are widespread and can be found in Tasmania, mainland Australia and on offshore islands. There is one possible sub-species, known as a false water rat, which has only been recorded in mangroves in a few isolated areas of northern Australia. They are difficult to trap, and numbers aren't confidently known at present.

The rakali has a wider distribution than the platypus. It favours disturbed habitat over pristine forest, and was common in irrigation channels before they were lined with plastic to improve their efficiency. It has been seen in urban areas, but is more common in the country, and seems to be increasing its prevalence in marine environments. A shark caught off a Gippsland beach recently was found to have eaten a few for supper.

It shares some physical characteristics with other aquatic mammals such as otters. These are long whiskers, small backward-facing ears, a blunt face with a powerful jaw and a fat tail. It has also been known to swim on its back while eating, like a sea otter. Its tail has a white tip and this is common to all and the best indicator



Distribution of *Hydromys chrysogaster* in Australia (source: Strahan 2004)

for identification. A mottled appearance is common, and three colour types have been recorded: the first has a yellow chest, the second a white chest, and the third is a more uniform brown. The fur is soft and lustrous, but coarser in winter.



The white tail tip is the most obvious identifying feature of the water rat, whether on land or in the water (Photo: Tamara Leitch)

Rakali can weigh up to 1.3kg. They are similar in size to, and can be easily be mistaken for, platypus. Male rakali are the same size as female platypus, but male platypus are bigger and female rakali smaller. Rakali may share burrows with platypus, or may have their own. They swim low in the water and can be identified by their white tail tip and prominent whiskers, their low profile with the head separated from the body and their wide wake when swimming. Diving behaviour is different from platypus. When a platypus dives it leaves a wave pattern of concentric circles on the surface and comes up close by. Rakali leave less obvious entry waves and often come up a long way from their entry point.

The presence of rakali is often detected when middens of shellfish and crustacean parts are found close to a waterway. These are sometimes accompanied by tracks from their partially-webbed feet and tail. Rakali come out of the water to feed as their fur isn't dense enough to support long periods in the water.

Like platypus, they eat aquatic insects, frogs, shellfish and crustaceans, but will also eat fish, may try to pull waterbirds underwater and may eat bats. They have worked out how to eat cane toads and survive.

They are fast-breeding and short-lived; they are thought to live for just three to four years in the wild. Drought is a definite threat to them as, during a long period of drought, they may all die without breeding. They are predated by cats, dogs and foxes, and many were shot for their fur during the 1940s and 1950s. Opera house yabby nets will kill both rakali and platypus and are illegal in all Victorian public waters.

Conservation measures to help protect the species include fencing waterways, ensuring environmental flows in streams, creating drought refuges and designing wetlands to be accessible and suitable for burrow-making.

Sightings can be reported to the Australian Platypus Conservancy at *www.platypus.asn.au* where there is a form for this purpose. Locally they have been seen by our club members in Billys Creek, Hazelwood Pondage and around the jetties in Lakes Entrance and Paynesville.

Jay Duncan

Map source: Strahan, R. (ed) 2004. The Mammals of Australia. Reed New Holland, Sydney.

Excursion to Tarra-Bulga National Park 27.08.2016

After a scenic drive with Silver Wattles in full bloom, we gathered in the crisp air of Tarra-Bulga rainforest. The initial chill soon left us as we walked and encountered the amazing diversity of flora and fauna in this forest. It's interesting to see how plants have evolved to fill every niche in this environment. Just taking the ferns as an example: they range from tree ferns like *Cyathea*, to climbers like kangaroo ferns, and ground dwellers of all sizes from medium to minute ones that could be mistaken for mosses.



An unfurling frond of the Batwing Fern (Photo: Helen Culjkovic)

The vegetation is ancient in this forest. You can see that in the Southern Myrtle Beech trees *Nothofagus*

cunninghamii. Their origins have been traced back to Gondwanaland, a single tree can live for over 1,000 years and they continue to grow in certain pockets of forest such as Tarra-Bulga.

During our walk we identified over 18 bird species and 85 plant species. I had a chance to learn much about the environment and find interesting photographic subjects. At the end of the Bulga



part of our walk, it was a highlight to have lunch with the Crimson Rosellas – a bold and endearing species.

Helen Culjkovic

*Bird and plant lists are available in the electronic version of the Naturalist

Rose lunching with the rosellas (Photo: Helen Culjkovic)

Excursion to Holey Plains 24.09.2016

The excursion to Holey Plains State Park was led by Ken Harris and joined by 15 participants. Holey Plains covers an area of 10,638 hectares of mostly banksia and eucalypt open forest and woodlands growing on a series of sandy ridges. The park was proclaimed in 1977 and protects an extremely high diversity of flora and abundant wildlife. It is located south of the Princes



Highway between Rosedale and Sale.

We commenced our excursion at Harrier Swamp with a 1km walk through the banksia forest around the swamp. The tall Saw Banksias were prolific, though not in flower. The purple Wax-lip Orchids and the Nodding and Tall Greenhood Orchids were in flower; altogether 11 different orchids were seen on the day.

Wax-lip orchid (Photo: Tamara Leitch)

After a welcome cuppa we moved on for a short stop opposite open paddocks off Rosedale-Stradbroke Road. Before our destination, a Spotted Quail thrush stopped the convoy. This also proved to be a good place to view lots of showy, red Running Postman, Pink and White Heath, a Maroonhood Orchid and Golden Grevillea. The Small Gnat-orchid took a practiced eye to see – thanks Jack.



Small Gnat-orchid (Photo: Tamara Leitch)

We also pulled over to view an echidna, noted three different butterflies including a colourful Jezebel, and Craig photographed an Eastern Three-lined Skink. Altogether the photographers had a very busy day.

Our third stop further along the way was at a small area which Parks Victoria had fenced off to prevent animals foraging. The success of their action was plain to see – the rare Wellington Mint-bush *Prostanthera galbraithiae* and Sticky Boronia were in full flower. It was a beautiful area surrounded by banksias and large and small grass-trees, but no Mint-bush occurred outside



Golden Grevillea (Photo: Tamara Leitch)

the fence! It was a beautiful, sunny day and after some more adventurous driving along sandy



Sticky Boronia at Holey Plains (Photo: Tamara Leitch)

roads, we arrived at Merrimans Creek picnic area for our lunch. Two more short walks followed before we headed for home. Top sightings for the "Birdos" were Spotted Quail-thrush, Scarlet Robin, Brown-headed Honeyeater, Golden Whistler, a Mistletoebird and a Striated Pardalote. Over 30 birds were recorded for the day. Thanks Ken, for a very interesting and well planned excursion.

Meryl Cracknell

Vale Mary Austin

Many club members were saddened to learn that Mary Austin had passed away in her sleep during the night of 22nd December, at the age of 94 years. She had been participating in club activities as recently as our November general meeting, where she was in good spirits.

Mary and her twin sister Ruth, who pre-deceased her in 2004, were born in August 1922 in Leongatha, its hospital being close to Mirboo North, where their parents lived on a farm on Berry's Creek Road. As part of her long and varied career in nursing, both in many parts of Australia and overseas, and having just completed her Diploma in Community Health Nursing in Melbourne, Mary moved to Churchill in 1975 to take up the position of Community Health Nurse at the town's newly established Community Health Centre. Not long after that, she joined the LVFNC, in line with her lifelong passion for natural history. She had in earlier years attended meetings of the Field Naturalists Club of Victoria and university extension lectures in botany, whilst working and studying in Melbourne. Mary's delight in observing and studying the natural world made her a valued participant in many field trips, club camps and Botany Group sessions and she wrote up many activities for publication in the *Latrobe Valley Naturalist*. A keen and accomplished photographer, she was one of the judges for the club's Nature Photography competition held in 2010 as part of our 50th anniversary celebrations. Mary served on the club's committee for some years after her retirement in 1987, when she was made a Life Governor of the Churchill Community Health Centre, in recognition of her many outstanding contributions to the local community.

As will other club members, I have all sorts of happy memories of Mary's anecdotes of happenings in her eventful life and of shared experiences during club activities. Just one - I was in disgrace at one of our summer camps at 'Welcola', the former Traralgon High School camp on the Wellington River north of Licola. Mary had made a magnificent apricot pie with fruit from her own garden, and I managed to burn it black whilst attempting to warm it up in the camp kitchen's temperamental oven!

Twelve current and past club members attended the fitting and moving service to celebrate Mary's remarkable life in Churchill on 5th January.

Philip Rayment

REPORT ON BUSINESS MEETING 21.11.2016

Finance

Cash Management Trading Account: \$5,135.28 Term Deposit: \$14,670.23

Business Arising, Correspondence & General Business

- Summer camp to Lakes Entrance 3-6 Feb 2017: Have 20 people booked. Only space for one male in units. Balance of \$205/unit or \$1025 due December 3. Wendy to pay by credit card. Need to plan excursions Phil will put together suggestions.
- SEANA Autumn Camp at Sale 2017: Excursions have been planned each day, and some need people from our club to act as facilitators.
- Photographic competition: Have a reasonable number of entries. Application for Community Function grant has not been done so Phil will do it.
- 'Kurth Kiln: Walking for Pleasure': Wendy attended the launch of this book about the walking tracks in Kurth Kiln Regional Park. Material supplied by LVFNC and Ken Harris' photos included in book. Purchased a copy for the club.
- Australian Business Register: Our business details need updating. Phil put in original application, so will contact them.
- Received planning document regarding joint management of 10 parks and reserves by Parks Victoria and the GunaiKurnai Traditional Owner Land Management Board.

Conservation Matters

- Tyers Bridge over the Latrobe River: Letter of concern sent and reply from Latrobe City Council received with info on progress and request for further input. Phil will continue the process.
- Purple Diuris orchid count: Longford results still prolific, just over 17,000.
- Received request via e-SEANA to put in an objection to a proposed eco-resort facility at Princetown, near the Gellibrand River Estuary Wetland. Decided it was out of our area so, with no local knowledge, we would not respond.

WELCOME TO NEW MEMBERS

The Club welcomes June Dolan from Newborough, Tamara McKimmie from Trafalgar, and Colin Cook and Kathryn Lesney-Noakes from Moe. We wish you all a long and happy association with us.

Guest speaker for February *Dr Andre Chiaradia*

Andre is a scientist with Phillip Island Nature Parks whose research is focused on the ecology of Little Penguins. He will speak about his studies of the birds' diet, diving behaviour, breeding success and response to environmental changes.



Guest speaker for March Peter Ware

At our March meeting, Peter Ware will speak about the Drouin Significant Tree Register. Community members have been collecting data on the largest trees in the town to educate the people about the value of local trees and create a reference for town planners and developers.



Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc. The Club subscription includes the "Naturalist".

Brief contributions and short articles on any aspect of natural history are invited from members of all clubs. Articles, including those covering Club speakers and excursions, would typically be around one A4 side in length, should not exceed 1,000 words, and may be edited for reasons of space and clarity. Photos should be sent as an attachment and be a maximum of 1 megabyte in size.

Responsibility for the accuracy of information and opinions expressed in this magazine rests with the author of the article.

Contributions should be addressed to:

Ms Tamara Leitch The Editor LVFNC Inc. PO Box 839 TRARALGON VIC 3844 Phone: 0438 372 186 Email: tleitch@wideband.net.au

Deadline for articles to be considered for inclusion in the next issue (March/April): 10 March 2017

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APPENDIX I – Tarra-Bulga NP Bird List 27.08.2016

Cockatoo, Gang-gang Cockatoo, Sulphur-crested Currawong, Pied Eagle, Wedge-tailed Fantail, Grey Lyrebird, Superb Magpie, Australian Pardalote, Striated Robin, Eastern Yellow

Family

Robin, Flame Robin, Pink Rosella, Crimson Scrubwren, White-browed Shrike-thrush, Grey Spinebill, Eastern Thornbill, Brown Thrush, Bassian Whipbird, Eastern

Common Name

APPENDIX II – Tarra-Bulga NP Plant, Fungi & Lichen List 27.08.2016

Botanic name

Ferns Aspleniaceae Asplenium bulbiferum Mother Spleenwort Blechnum chambersii Lance Water-fern Blechnaceae Blechnum fluviatile Ray Water-fern Blechnaceae Blechnaceae Blechnum nudum Fishbone Water-fern Blechnaceae Blechnum patersonii Strap Water-fern Blechnaceae Blechnum wattsii Hard Water-fern Rough Tree-fern Cvatheaceae Cyathea australis Slender Tree-fern Cyatheaceae Cyathea cunninghamii Cyatheaceae Cyathea x marcescens Skirted Tree-fern Dennstaedtiaceae Histiopteris incisa Bat's Wing Fern Dennstaedtiaceae Pteridium esculentum Austral Bracken Dicksoniaceae Dicksonia antarctica Soft Tree-fern Shiny Shield-fern Dryopteridiaceae Lastreopsis acuminata Dryopteridiaceae Polystichum proliferum Mother Shield-fern Rumohra adiantiformis Leathery Shield-fern Dryopteridiaceae Gleicheniaceae Sticherus urceolatus Silky Fan-fern Hymenophyllaceae Hymenophyllum australe Austral Filmy-fern Hymenophyllaceae Common Filmy-fern Hymenophyllum cupressiforme Hymenophyllaceae Hymenophyllum flabellatum Shiny Filmy-fern Hymenophyllum rarum Narrow Filmv-fern Hymenophyllaceae Veined Bristle-fern Hymenophyllaceae Polyphlebium venosum Polypodiaceae Kangaroo Fern Microsorum pustulatum Polypodiaceae Microsorum scandens Fragrant Fern Polypodiaceae Notogrammitis billardierei Common finger-fern Psilotaceae Long Fork-fern Tmesipteris obliqua

Monocots

Cyperaceae Cyperaceae Cyperaceae *Carex appressa Carex sp. Lepidosperma elatius* Tall Sedge Sedge Tall Sword-sedge *Juncaceae Poaceae Poaceae Xanthorrhoeaceae*

Dicots

Adoxaceae Apocynaceae Apocynaceae Araliaceae Araliaceae Asteraceae Atherospermataceae Bignoniaceae Brassicaceae Fabaceae Fabaceae Geraniaceae Gesneriaceae Goodeniaceae Lamiaceae Lamiaceae Loranthaceae Monimiaceae Myrtaceae Nothofagaceae Pittosporaceae Pittosporaceae Proteaceae Ranunculaceae Ranunculaceae Rhamnaceae Rosaceae Rubiaceae Rutaceae Solanaceae Urticaceae

Juncus sp. *Microlaena stipoides Tetrarrhena juncea Dianella tasmanica*

Sambucus gaudichaudiana Marsdenia rostrata Parsonsia brownii Hydrocotyle hirta Polyscias sambucifolia Bedfordia arborescens Cassinia aculeata Cassinia longifolia Cotula australis Olearia argophylla Olearia lirata Olearia ramulosa Senecio biserratus Senecio glomeratus ssp. alomeratus Senecio linearifolius Atherosperma moschatum Pandorea pandorana *Cardamine hirsuta Acacia dealbata Acacia melanoxylon Geranium sp. Fieldia australis Goodenia ovata Prostanthera lasianthos Prostanthera melissifolia Amyema pendulum Hedycarya angustifolia Eucalyptus regnans Nothofagus cunninghamii Billardiera longifolia Pittosporum bicolor Lomatia fraseri Clematis aristata Clematis glycinoides Pomaderris aspera Acaena novae-zelandiae Coprosma quadrifida Zieria arborescens Solanum aviculare Australina pusilla ssp. muelleri Urtica incisa

Rush Weeping Grass Forest Wire-grass Tasman Flax-lily

White Elderberry Milk-vine Twining Silkpod Hairy Pennywort **Elderberry Panax** Blanket Leaf Common Cassinia, Dogwood Shining Cassinia Common Cotula Musk Daisy-bush Snowy Daisy-bush Twiggy Daisy-bush Jagged Fireweed Annual Fireweed **Firewheel Groundsel** Southern Sassafras Wonga Vine Flickweed Silver Wattle Blackwood Cranesbill Fieldia Hop Goodenia Victorian Christmas Bush Balm Mint-bush **Drooping Mistletoe** Austral Mulberry Mountain Ash Mvrtle Beech Purple Appleberry Banyalla Forest Lomatia Austral Clematis, Old Man's Beard Forest Clematis Hazel Pomaderris **Bidgee-widgee** Prickly Currant-bush Stinkwood Kangaroo Apple Smooth Nettle Scrub Nettle, Stinging Nettle

Urticaceae

Violaceae Winteraceae Caryophyllaceae *Viola hederacea Tasmannia lanceolata Stellaria flaccida*

Fungi Hygrophoraceae

Hygrocybe cheelii

Ivy-leaf Violet Mountain Pepper Forest Starwort

Mosses

Hypnodendraceae Hypopterygiaceae Meteoriaceae

Hypnodendron vitiense Cyathophorum bulbosum Papillaria flavolimbata

Lichens

Lobariaceae

Pseudocyphellaria billardierei

Liverworts

Hymenophytaceae Marchantiaceae Trichocolaceae *Hymenophytum flabellatum Marchantia bertoreana Trichocolea mollissima*